

SEQUENCE LISTING

<110> AIACH et al.

<120> Identification of polymorphisms in the EPCR gene
associated with thrombotic risk

<130> P08899US00/BAS

<140> 10/573,804

<141> 2006-03-28

<160> 18

<170> PatentIn Ver. 2.1

<210> 1

<211> 8167

<212> DNA

<213> Homo sapiens

<400> 1

aatggaaata ttccaggctg tgcacagtgg ctcaggctt gtaatcccagc atgttggag 60
gctgaagtgg gcggatcacc tgaggtcagg agttttagac caacctggcc aacatggta 120
aatccccatct ctactaaaaa tacaaaaatt agccagggtgt ggtggcagggt gactgtatc 180
ccagctactt gggaggctga ggcaggagaa tcgcttgaat ctgggagggt gagggtgcag 240
tgagccgaga tcacgccact gcatacaga agactccatc tcaaaaaaaaaaaa 300
aagaaaaaaag aaatgtttca taatttttaa taaaaggcaa gacaatataa attggtagtt 360
attnaagtca ttctactttt cctgaggccc agtgcaggaa aacaaagttc ctatcctgt 420
tccaactaga ccattttgat aagctgc当地 aagaaaaagac tttgtatgcta tttcttagcc 480
agtttgcaac agctgagagg tgagcatgaa agctcttgcata tatattcagt tcagagaatg 540
ggtgcttagt ttatgtccag agtttgcctt agatttcact atgacgtcag ctctccgggg 600
agaagtatat aaaataaaaaa gttaaaatcc ctctcagtcc tttacccat cctattcccc 660
agaggttaatc tctattgaca gtacccctcc agatatttc cctatgtata tacaaataca 720
cagatacaca ctgaaagttt atttggcca ggtgcagtgg ctcctgccta taccagagga 780
ttgctttagt gcaggagttc aagaccagcc tggcaacat agcgagacca catctctagt 840
aaaaataaaaaa aaaaaatagc taggcgtgtt ggcacagtgg cacgtacct tagtctcagc 900
tactcgggtt gttgagggtt gagaatact tgagccccggg aggtcaagcc tacaaattagc 960
tgtgattgtt tcactgcact atagcctgg caacagagct agaccctgtc tcaaaaaaaaaat 1020
ataataaat ttatataata tatatgagga tgaaattaca tatgtattat ttgaacagaa 1080
gtgaaatctt ttctttttt tttcagaca gaatcttgcgc gcatgaccctt ggctagaatg 1140
cagttgtgtt atctcggccc tctgcacact ccaccccttca gttcaagcg attctcatgc 1200
ctcggcttcc caagtagctg ggattacagg catgcaccac catgcccagc taattttgt 1260
attttcgtt gagacgttgc ccatatttgc caggctggc tcaaaactccctt ggcctcaagt 1320
gatctgccca cctccggctc cccaaatgtcc agcagcatgc tcggaggagt gactttaaag 1380
cttttctact tgcttccatg agtaaggac gcattttaca ctgctatccca aaactcatca 1440
tagaaacata cacacacaaa accaaagcac acatatacaa ctgagcaaat atttcatgac 1500
ataaacactt ctcttactaa gggtagcgc ctgaaattttt gtattctgtc ctatttcatt 1560
ttttaaaaat ggttaaccatg acctgtctaa ttgatttcat tttccactaa taaattatga 1620
cctcagtttcc aaaaagattt cttaggtaa ccaatcatct tctgagattt atacagattt 1680
ctcataattt tctccatattt tttaaaaaaca tgctgcagt gactgcttta cactcattttt 1740
atgactactt ctgagaccaa gatccggat tatgtatgg ttatattttt aaaaattctgg 1800
taaaatgttag ccattataact gaaaaactaa attttaatct tggatctgtc accaccatga 1860
tatataaaact ttggcaagt ccctgcacact ctctggaccc tcaatctcccc atcagaacc 1920
tgctgatctt actcccaaggat gtgtgctcta agttgaaatg agatgccccca ccccccgt 1980
cagcgccggc aggacttctc accaaggctt tctccccc ttccgctccc tgttctgg 2040
tccttaggaag cagcccaagg agaaggggaaa aggcagggtct gggcaggagg gagcaatgaa 2100
gggcggggca gaggaggccc aggaggggagg ccggccccctt agtaggaaat gagacacagt 2160
agaaataaca ctttataagc ctcttccttcc tcccatctcc tggctccctt ccattctccct 2220
ctgcccagac tcccccctcc ccagacggc ctcacttctc tttcccttag actgcagcc 2280
gcggagcccg cagccggccc gagccagggaa cccaggtccg gagcctcaac ttcaggatgt 2340

tgacaacatt gctgccgata ctgctgtgt ctggctggc cttttgtgc caagacgcct 2400
cagatggtga gtcggggca catctctgc ctcaggatgg ttctggagaa tctcagtcta 2460
tctgggcaca tggcaagacc acaggagagc ttatctcaca gcatctgtgt ctgcagctgg 2520
ctagatctct ctacaggca ggcagactc tggggactgg ttctgtccc aaagccaagg 2580
tgagttaga catttaagcc cctgaaaagg gggagatgaa agaggctagg ggaaacagga 2640
tgactggaaa catgagaaag aaaccagcag agaggtagg agaatcagcc ccagggagag 2700
gggagaaagg ggaactgagg gtgatggtag ataggggtac atctagggga gacgggaaga 2760
ggctcagaag agaagagaaa tggagggaaat gggagaccc tggaaaact gatgaaagaa 2820
gtggggaaag agtggggcag agagaggta gggggacta gggaaaatgg aaggagactg 2880
gtcgagctg gtggaaactgg ggagaaagag atgctgtgcc taatagaact tatggcgt 2940
caggctactg aagtggccct gtttaagcag aaaaggagt tattaccctc cattataatt 3000
gcacaggggc ctcccttccc ctctctcaca atccccgtaa cttcagtctc cccctcagag 3060
aggcagcaa taataaccag tattcaatga gtgctacta tggtaataac atgtattgac 3120
ccatttaact tgcacaaacc cctaaaggtt ggtatattt ttactatctc cattttatga 3180
ggaggaaact gggcacacaa gtagttaagg accatgtcta gggttatcca taaatataact 3240
tattcacatc tgcagatata aagcacaact tctcaatgc aaacacagac aggacccact 3300
cacacacaca gattacaac cccggactca tccaaatgtt ctctggcat caactctgt 3360
ccagccttt ttctgggtt aggaagcaga gattaccaag catggttcca tagcttagag 3420
gagtcagtg tggctgtgt gtgttggag acagccagg agtatcccgt gagatacaca 3480
ctaataatgt gtggctggg atcactgaaa cagacacact gtgtctcg 3540
aaaaaaatttca caagaagagg gcaactgagc tgggtcttt ttttttgc tttcttctt 3600
ttttctttt tttttttttt tttttttt agatggagtc ttgtgtgtc acccaggctg 3660
gaatgcagt gcacaaatttca agctaactgt aaccccaac tcccagggttcc aggcattct 3720
cctgcctcag cctcctgagt agctggact acaggcatgt accaccacgc ctggctaata 3780
tttgcattt tagtacagat ggggttgcg catgtggcc aggctggct tgaatccctg 3840
acctcaagt atcccccgc ctcggccccc caaagtgcgt ggattacagg catgagccac 3900
cgcgcccagt ctctgagctg ggtcttaat catgaataaa cttcgccagg cagaaaaagg 3960
gagggcagagc aatccgtaca tgctattcat gtgtcagcca aaggcagcat gaggaatccc 4020
aactagttt atatataagc agcgggaagc ggccagaaaa ggcagcagg gccaggtctc 4080
tagcagcctt gaatgccagg ctaaagactc tggacttgat cctgtgggg ggcagtgtag 4140
cagaatggct gagtgcgtga cttgactgcc tacgtcAAA cttggctct gctacactat 4200
ctctgtctca gtttcgtatc tagactgggg ttaataatag tagctattgc attaagccac 4260
tggggaaagg cacaaagata ataatgtatg taaagccat tgcccaggataaataagca 4320
ctgaatcgac attggctatg attatttttt attaatgaag gggagggggg tatggcactg 4380
gaagattttt aatggaaaaa ggacatgatc tcatccctgg gtcagggtgg ggtcgaata 4440
gagaacgggg agatgaagta gaaagttact accccactt agatgagacg gatgaatcc 4500
gaatcagggc agtggaaagag gagatggaga acaggcgatg gaatttggat tttattcagg 4560
tcaggattt ttaaccattt gttccgttgg ttaacaggaa acgggggggg gggagggcc 4620
gggtaaaaaa ggaggcagaa aggagtgtct cttccactgc aggccctcagt ttccctcatct 4680
gtaaaacgga gataataatc cctgtccgtt cctcctggca gagttactgt cagcgtcaaa 4740
cgggagaagc ggtggggaggg cacattatag tttatgaagg gtgcagaagg cggccggcca 4800
gcctcgaggt agggggtttat tatctccgc tgccccccgc cccctccac gccggcccg 4860
gctgaagttt actctgccc caggcctcca aagacttcat atgctccaga tctcctactt 4920
ccgcgacccc tatcacgtgt ggtaccagg caacgcgtcg ctggggggac acctaacgca 4980
cgtgctggaa gcccagaca ccaacaccac gatcattcag ctgcagccct tgcaaggagcc 5040
cgagagctgg ggcgcacgc agagtgccct gcagtcctac ctgctccagt tccacggcct 5100
cgtgcgcctg gtgcaccagg agcggacctt ggcctgtgag taggcgcgc gccccggc 5160
ggtctggcg gggctagtgg gggcgggggc tggcggttgg gggcgggggc tggcgatgg 5220
aggcgggctg gggcttgcag ggaccggca gccactggag ctgcgtggc cctggccct 5280
tgaagatttc tgggtgggg ctggagagag gcagttgtcc cgcctaagaa agcccccact 5340
cgggcgtcg tcctgtggc ataacctttt gggatagacc ctgttggaaag gcccgtacac 5400
cgtgacgtcg aaggccccca gaaaactctt caccctctgc ctcacagtcc tccaaactct 5460
tttcttcata gatctccgtc cttcccttcc cacagcccccc agcacttcac ccccccaccc 5520
ccagccacctt ctcatacaag ctgatgactt cgctttagc tccactcatg acccgaactc 5580
ttcccccaaa gaccccaagt tcttcctca aagccccact cttccccgt cacaacccta 5640
actcccttctt ctcaaaagacc ccaatttctt ttctcaaaagc accaagcacc actccgtccc 5700
ccttccccca ccatcatggc ctttaattcc tttctctctt agtccccccac cccacccct 5760
ttttttttt tttttttt ttttttttgg acggagtctt gctctgtcg ccaggctgga 5820
gtgcagtggc gcgatctcggttcactgcaaa cttccgcctc ccgggttcaa gcgattctcc 5880
tgcctcagcc tcccaagcag ctgggactac aggcacccgc caccacgccc ggctaatttt 5940
ttgtatTTT agtagagacg gggtttgcggc atgttggcca ggctggctc gaactcctga 6000

cctcaggcga tccacaagcc tggcctccca aagtgcgtgg attacaggcg tgagctgccg 6060
cccctgcccc agcctcaccc cctgtttttt ttttcttatta cagttgaaca aggcttgaca 6120
atccctttt ttcatcacag tccctggccc cttctttctt agcctctaac aggctaaacc 6180
caaacccttc ctcacagccc caggcccttc tccccatagt tccctgacct agactcccc 6240
ctcctcacag cactgactct tgccttctca tggcttttc cccttgggtgg gcctcgcccc 6300
acacacctggca ccctctctgc acagttccct gatctgtact gtctatccac agttcctctg 6360
accatccgct gtttcttggg ctgtgagctg cctcccgagg gctctagagc ccatgtcttc 6420
ttcgaagtgg ctgtgaatgg gagctcctt gtgagttcc ggccggagag agccttgtgg 6480
cagggcagaca cccaggtcac ctccggagtg gtcacccctca ccctgcagca gctcaatgcc 6540
tacaaccgca ctccgtatga actgcgggaa ttcccttgggagg acacctgtgt gcagttatgtg 6600
cagaaacata ttcccgccga aaacacgaaa ggtatgtatgg gacggggccc aggcctgcaa 6660
gctggggaga gggccgggttc cagacaaatg gatggacactg aaggatggat gccttagagca 6720
acaagaggcc cacagctggg gtttgggac agaacacacg cagttcagt cagttggtaa 6780
acgggtccct ttcctcttggg gcagaaacgc tttgggtttt gactcaaattc atggactcct 6840
tggggccctt ttcttcgggc taactctttg catgttctgc agggagccaa acaagccgct 6900
cctacacttc gctggtcctg ggcgtcctt tggcagttt catcattgt ggtgtggctg 6960
taggcatttt cctgtgcaca ggtggacggc gatgttaatt actctccagc cccgtcagaa 7020
ggggctggat tgatggaggc tggcaaggga aagtttcagc tcactgtgaa gccagactcc 7080
ccaactgaaa caccagaagg tttggagtgaa cagctccctt cttctccac atctgcccac 7140
tgaagatttgg agggaggggg gatggagagg agaggtggac aaagtacttg gtttgcataag 7200
aacctaagaa cgtgtatgct ttgctgaatt agtctgtataa gtgaatgtttt atctatcttt 7260
gtggaaaaca gataatggag ttggggcagg aagcttatgg cccatcctcc aaagacagac 7320
agaatcacct gaggcgttca aaagatataa ccaaataaac aagtcatcca caatcaaaat 7380
acaacattca atacttccag gtgtgtcaga cttggatgg gacgctgata taataggta 7440
gaaagaagta acacgaagaa gtgggtggaaa tgtaaaatcc aagtcatatg gcagtgatca 7500
attattaatc aattaataat attaataataat ttcttatatt taaggcattt ttatctcctc 7560
cactttgcaa aatttcttggaa aagtaacct ataccattt cttctgtttt cttatttctc 7620
actcattttt tttttttttt tttttttttt ttgagacaga gtcttgcctt gttgcctagg 7680
ctggagtgca atgggtgtat ctcagctcac tgcaacctct gcctcccggt tcaagcaatt 7740
ctccctgcctc agcctcccaa gcagctggga ttacagatgc atgccaccac acccagctaa 7800
tttttgtatt ttttagtagag atggggtttc accacgttgg ccacccgttgc acgtgtatcc 7860
gcctacctcg gcctcccaa gtgctggat tagacgtgag ccactgcgc tggcttctc 7920
actcattttt agacccagtg caatctgact tctctataaa ctactctaag atcaccagta 7980
acctctaatt gtcaaaaccgt caccctacat ggtatctgca aatttgcggg ctagaactct 8040
ctttttgctt taacttctga gataccatac ttcaatttttt aaaactgttc tgtctacttt 8100
ttttcaatcc ctgtactat gtcaccccttac acgattcacc ctggaaatgc tggcttccctt 8160
agaattc
8167

<210> 2
<211> 8167
<212> DNA
<213> Homo sapiens

<400> 2
aaatgaaata ttccaggctg tgcacagttt ctcaggcttgc taatcccagc atgtttggag 60
gctgaagtgg gcggatcacc tgaggcttgc agtttgcggc caacctggcc aacatggta 120
aatcccattt ctactaaaaa tacaaaaattt agccagggtt ggtggcagggt gactgtatc 180
ccagctactt gggaggctga ggcaggagaa tcgcttgcattt ctggggagggtt gaggttgcag 240
tgagccgaga tcacccactt gcatacagca agactccatc tcaaaaaaaaaa gaaaaaaaaa 300
aagaaaaaaag aaatgtttca taatttttaa taaaaggcaaa gacaatataa attggtagtt 360
atttaagtca ttctactttt cctgaggccc agtgcaggaa aacaaagtcc ctatcttgc 420
tccaactaga ccattttgtat aagctgcacaa aagaaaaagac tttgtatgc tttcttagcc 480
agtttgcaac agctgagagg tgacatgca agctcttgcata tataattcagt tcagagaatg 540
ggtgcttagt ttatgtccag agtttgcaggcc agatttcaact atgacgtcag ctctccgggg 600
agaagtataat aaaataaaaaa gttaaaaattt ctctcagtcc tttaccacat cctattcccc 660
agaggttaatc tctattgaca gtacccctcc agatattttc cctatgtata tacaatatac 720
cagatacaca ctgaaagttt aattttggcca ggtgcagggtt ctccctgcctt taccagagga 780
ttgcttgcgtt gcaaggatcc aagaccaggcc tggggcaacat agcggagacca catctctagt 840
aaaaataaaaaa aaaaaatagc taggcgtgtt ggcacagtgg cacgtaccc ttgtctcagc 900
tactcgggtt gttgaggtgg gagaatcact tgagccggg aggtcaagcc tacaattagc 960

tgtgattgct tcactgcact atagcctggg caacagagct agaccctgtc tcaaaaaat 1020
aataataaat ttatatata tatatgagga tgaaattaca tatgtattat ttgaacagaa 1080
gtgaaatctt ttctttttt tttcagaca gaatcttgcc gcatgaccac ggctagaatg 1140
cagtgggtgtg atctcgccc tctgcaact ccaccccca gttcaagcg attctcatgc 1200
ctcggcttcc caagtagctg ggattacagg catgaccac catgcccagc taattttgt 1260
attttcgtt gagacgttcg ccatattggc caggctggc tcaaactcct ggcctaagt 1320
gatctgcca cctccggcctc ccaaagtgcc agcagcatgc tcggaggagt gactttaag 1380
cttttctact tgcttcctag agtaaggac gcattttaca ctgctatcca aaactcatca 1440
tagaaacata cacacacaaa accaaagcac acatatacaa ctgagcaat atttcatgac 1500
ataaacactt ctcttactaa gggtgacgac ctgaaatttt gtattctgtc ctatttcatt 1560
ttttaaaaat ggttaaccatg acctgctaa ttgatttcat tgtccactaa taaattatga 1620
cctcagttt aaaaagattt ctttaggtaa gcaatcatct tctgagatt atacagattt 1680
ctcataattt tctccattt ttaaaaaaca tgctgcagt aactgctta cactcattt 1740
atgactactt ctgagaccaa gatcccggat tatgtattt ttatattt aaaaattctgg 1800
taaaaatgttag ccattataact gaaaaactaa attttaatct tggatctgtc accaccatga 1860
tatataaaact ttgggcaagt ccctgcaccc ctctggaccc caatctcccc atcagcaacc 1920
tgctgatcct actcccagga gtgtgctcta agttgaaagt agatgccccca ccccccgt 1980
cagcgccggc aggacttctc accaagccct tctccccctt ttccgctccc tgttcctgg 2040
tccttaggaag cagcccaagg agaaggaaa aggccaggctc gggcaggagg gagcaatgaa 2100
gggcggggca gaggaggcgc aggaggaggcc cccggccccc agtaggaaat gagacacagt 2160
agaaataaca ctttataagc ctcttcctcc tcccatctcc tggcctcctt ccatcctcct 2220
ctgcccagac tccggccctc ccagacggc ctcacttctc ttcccttagt actgcagcca 2280
gcggagcccg cagccggccc gagccaggaa cccaggtccg gggccctcaac ttcaggatgt 2340
tgacaacatt gctggcgata ctgctgctgt ctggctggc cttttgttagc caagacgcct 2400
cagatgggtga gtggggggca catctccctc ctcaggatgg ttctggagaa tctcgtcta 2460
tctgggcaca tggcaagacc acaggagac ttatctcaca gcatctgtt ctgcagctgg 2520
ctagatctt ctacaggcga ggcagagctc tggggactgg ttcgtgtccc aaagccaagg 2580
tgagtttagt catttaagcc cctgaaaagg gggagatgaa agaggctagg ggaaacagga 2640
tgactggaaa catgagaaag aaaccagcag agagggtagg agaattcagcc ccaggagag 2700
gggagaaagg ggaactgagg gtgatggtag atagggtac atctagggga gacgggaaga 2760
ggctcagaag agaagagaaa tggagggaaat gggaaagaccc tggaaaact gatggaaagaa 2820
gtgggggaag agtggggcag agagaggta gggaggcta gggaaaatgg aaggagactg 2880
gtcgagctg gtggaaactgg ggagaaagag atgctgtcc taatagaact tatggcgtat 2940
caggctactg aagtggccct gtttaagcag aaaagggtt tattaccctc cattataatt 3000
qcacagggc ctcccttccc ctctctcaca atccccgtaa cttcagtc cccctcagag 3060
aggcagcaaa taataaccag tattcaatga gtgctcaact tggtaataac atgtattgac 3120
ccatttaact tgcacaaacc cctaaaggtt ggtaatatta ttactatctc cattttatga 3180
ggagggaaact gggtcacaga ttagttaagg accatgtcta ggttatcca taaatataact 3240
tattcacatc tgcagatata aagcacaact tctcaatgc aaacacagac aggaccact 3300
cacacacaca gattacaac cccggactca tccaaatgtc ctctggcat caactctgt 3360
ccagcctt ttcgggtgtt aggaagcaga gattaccaag catggttcca tagcttagag 3420
gagtcagtg tggctgtgt gtgttggag acagccaggat agtatcccgt gagatacaca 3480
ctaataatgt gtggctggg atcaactgaaa cagacacact gtgtctcggt gggcatcaga 3540
aaaaaaatttca caagaagagg gcaactgagc tgggtctttt tttctttgt tttctttctt 3600
ttttctttt tttttttt tttttttt agatggagtc ttgtgctgtc acccaggctg 3660
gaatgcagtgc acacaatttca agctaactgt aacctccaac tcccagggtt aggcattct 3720
cctgcctcag cctctctgat agctggact acaggcatgt accaccacgc ctggctaata 3780
tttgtacttt tagtacagat ggggttgcg catgtggcc aggctggct tgaatccctg 3840
acctaagtgc atccgcccgc ctcggccctt caaagtgtc ggttacagg catgagccac 3900
cgcggccagtt ctctgagctg ggtttaaat catgataaaa cttcggccagg cagaaaaagg 3960
gaggcagagc aatctgtaca tgcttattcat gtgtcagcca aaggcagcat gggatccc 4020
aactagttt atatataagc agcgggaagc ggccagaaaa ggcagcagg gccaggtctc 4080
tagcagccctt gaatgccagg ctaaagactc tggacttgc tggacttgc tggacttgc 4140
cagaatggct ggttgcgttgc ctttgcgtt tacgtcaca ctttggctt gctacactat 4200
ctctgtctca gtttccatgt tagactggg ttaataatag tagtatttgc attaagccac 4260
tggggaaagg cacaagata ataatgtatg taaagccat tggccaggat ataataagca 4320
ctgaatcgac attggctatg attatttt attaatgttgc gggagggggt tatggactg 4380
gaagattttt agtaggaaaa ggacatgtc tcatccctgg gtcagggtt ggtcgaaata 4440
gagaacgggg agatgaagta gaaagttact accccaggct agatgagacg gatgaatcct 4500
gaatcaggc agtggaaagag gagatggaga acaggcgtt gatgttggat tttattcagg 4560
tcaggattt ttaaccattt gttccgttgg ttaacaggaa acggggggag ggagagccga 4620

gggtgaaaaa ggaggcagaa aggagtgtct cttccactgc aggccctcagt ttcctcatct 4680
gtaaaacgga gataataatc cctgtcctgt ctcctggca gagttactgt cagcgtcaaa 4740
cgggagaagc ggtgggaggg cacattatacg ttatgtaaagg gtcgagaagg cgggcggcca 4800
gcctcgaggt agggggttat tatcttccgc tgcccgcgc cccctccac gccggcccg 4860
gctgaagttg actctgccc caggcctcca aagacttcat atgctccaga ttcctactt 4920
ccgcgaccgg tatcacgtgt ggtaccaggg caacgcgtcg ctggggggac acctaacgca 4980
cgtgctggaa ggcccagaca ccaacaccac gatcattcag ctgcagccct tgcaggagcc 5040
cgagagctgg gcgcgcacgc agagtgccct gcagtcctac ctgctccagt tccacggcc 5100
cgtgcgcctg gtgcaccagg agcggaccc ggcctgtgag taggcgcgcg cgcggggccg 5160
ggtctggcg gggcttagtgg gggcggggccc tggcggtgg gggcggggccc tggcgatgg 5220
aggcgggctg gggcttgca gggccggca gccactggag ctgggtggcg cctggcctt 5280
tgaagattgc tgggtgggg ctggagagag gcagttgtcc cgcctaagaa agccccgact 5340
cgggcgggtcg tcctgctggc ataacctttt gggatagacc ctgttggaaag gccctgacac 5400
cgtgacgtcg aaggccccca gaaaactcct caccctcgc ctcacagtcc tccaactct 5460
tttcttcata gatctccgtc cttcccttcc cacagcccccc agcaacttcac ccccccacct 5520
ccagccactt ctcataacaag ctgatgactt cgctcttagc tccactcatg acccgaactc 5580
ttccccccaa gaccccaagt tcttctctca aagccccact cttcccccgt cacaacccta 5640
actccttctt ctcaaagacc ccaattttttt ttctcaaagc accaagcacc actccgtccc 5700
ccttccccca ccatcatggc ctttaattcc tttctctccct agtccccccac cccacccctt 5760
ttttttttt tttttttttt ttttttttag acggagtctt gctctgtcg ccaggctgga 5820
gtgcagtgtc gcgcgcacgc ctcactgca cttccgcctc cgggttca ggcattctcc 5880
tgcctcaggcc tcccaagcag ctgggactac aggccccccg caccacgccc ggctaatttt 5940
ttgtatTTT agtagagacg gggtttcgcc atgttggcca ggctggctc gaactcctga 6000
cctcaggcga tccacaagcc tggcctccca aagtgtggg attacaggcg tgagctgccc 6060
ccccctgcccc agcctcaccc cctgtttttt ttttcttatta cagttgaaca aggctgaca 6120
atccccctt ttcatcacag tccctggccc cttctttttt agcctctaacc accgtaaccc 6180
caaacccttc ctcacagcccc caggcccttc tccccatagt tccctgaccc agactcccc 6240
ctcctcacag cactgactct tgcctctca tgttttttc cccttgggtgg gcctcgcccc 6300
acacacggca ccctctctgc acagttccct gatctgact gtctatccac agttctctg 6360
accatccgct gtttctggg ctgtgagctg cttcccgagg gctctagagc ccatgtcttc 6420
ttcgaagttt ctgtgaatgg gagctcctt gtgagttcc ggccggagag agccttgtgg 6480
caggcagaca cccaggtcac ctccggatgt gtcacccctca ccctgcagca gctcaatgcc 6540
tacaaccgca ctcggtatga actgcgggaa ttccctggagg acacctgtgt gcagttatgt 6600
cagaaacata ttcccgccgaa aacacacgaaa ggtatgtgg gacggggccc aggctgcaa 6660
gctggggaga gggcggttc cagacaaatg gatggacccg aaggatggat gcctagagca 6720
acaagaggcc cacagctggg gttttggac agaacacacg cagttcagt cagttggtaa 6780
acgggtccct ttccctctggg gcagaaaacgc tttgggttt gactcaaattc atggactct 6840
tggggcccta ttcttccggc taactcttt catgttctgc agggagccaa acaaggccct 6900
cctacacttc gctggcctcg ggcgtcctgg tggcggttt catcattgc ggtgtggctg 6960
taggcattttt cctgtgcaca ggtggacggc gatgttaattt actctccagc cccgtcagaa 7020
ggggctggat tggatggaggc tggcaaggaa aagttcagc tcactgtgaa gccagactcc 7080
ccaactgaaa caccagaagg tttggagtgaa cagctccctt cttctccac atctccccc 7140
tgaagatttg agggagggaa gatggagagg agaggtggac aaagtacttg gtttgcata 7200
aacctaagaa cgtgtatgct ttgctgaattt agtctgataa gtgaatgtttt atctatcttt 7260
gtggaaaaca gataatggag ttggggcagg aagctatgg cccatcctcc aaagacagac 7320
agaatcacct gaggcgttca aaagatataa ccaaataaac aagtcatcca caatcaaat 7380
acaacattca atacttccag gtgtgtcaga cttggatgg gacgctgata taataggta 7440
gaaagaagta acacaaagaa gtgggtggaaa tgtaaaatcc aagtcatatg gcagtgatca 7500
attattaatc aattaataat attaataat ttcttatatt taaggcattt ttatctcctc 7560
cactttgcaaa aatttctggaa aaagtaacctt ataccatc tttctgcttc cttatctc 7620
actcattttt tttttttttt tttttttttt ttgagacaga gtcttgcctt gttgcctagg 7680
ctggagtgtca atgggtgtat ctcagctcac tgcaacccctc gcctcccggt tcaagcaatt 7740
ctcctgcctc agcctcccaa gcagctggaa ttacagatgc atgccaccac acccagctaa 7800
tttttgtatt tttagtagag atggggtttcc accacgttgg ccacccctgac ctcgtatcc 7860
gcctacctcg gcctcccaa gtgctggat tagacgtgag ccactgcgcc tggcttctc 7920
actcattttt agacccagtgc caatctgact tctctataaa ctactctaag atcaccagta 7980
acctctaattt gtcaaaaccgtt caccctacat ggtatctgca aatttgcggg ctagaactct 8040
cttttgctt taacttctga gataccatac ttcaatTTT aaaactgttc tgtctacttt 8100
ttttcaatcc ctttgactat gtcacccatc acgattcacc ctggaaatgc tggcttccctt 8160
agaattc 8167

<210> 3
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 3
gctgaagtgg gcggatcacc 20

<210> 4
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 4
tctagcctgg gtcatgcggc 20

<210> 5
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 5
tcttgccgca tgaccaggc 20

<210> 6
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 6
ggaaggaggc caggagatgg 20

<210> 7
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 7
ctcttactaa gggtgacgacg 20

<210> 8
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 8
tctgatgccc cacgagacac 20

<210> 9
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 9
tctctacagg gcaggcagag 20

<210> 10
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 10
tcgtggtgtt ggtgtctggg 20

<210> 11
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 11
aggagtgtct cttccactgc 20

<210> 12
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 12
cttgttatgag aagtggctgg 20

<210> 13

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 13
cccagacacc aacaccacga t 21

<210> 14
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 14
gtctgtcttt ggaggatggg 20

<210> 15
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 15
agaggtggac aaagtacttg g 21

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 16
ggaagccagc atttccaggg 20

<210> 17
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 17
cctacacttc gctggtcctg ggcgtcctgg tctgc 35

<210> 18
<211> 22

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 18
caagtacttt gtccacacct cc



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/573,804	Martine Aiach	P08898US00BAS
INTERNATIONAL APPLICATION NO.		
PCT/IB04/03146		
I.A. FILING DATE	PRIORITY DATE	
09/28/2004	09/29/2003	
RECEIVED		
FEB 22 2007		
CONFIRMATION NO. 9377		
371 FORMALITIES LETTER		
 OC000000022559297		

Date Mailed: 02/21/2007

4-21-2007 28

NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

- Copy of the International Application filed on 03/28/2006
- Copy of the International Search Report filed on 03/28/2006
- U.S. Basic National Fees filed on 03/28/2006
- Priority Documents filed on 03/28/2006

COPY

The applicant needs to satisfy supplemental fees problems indicated below.

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Additional claim fees of \$360 as a non-small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.
- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.
- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.492(h) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

Total additional fees required for this application is \$490 for a Large Entity:

- \$130 Surcharge.

- This application clearly fails to comply with the requirements of 37 CFR. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998). If the effective filing date is on or after September 8, 2000, see the final rulemaking notice published in the Federal Register at 65 FR 54604 (September 8, 2000) and 1238 OG 145 (September 19, 2000). Applicant must provide an initial computer readable form (CRF) copy of the "Sequence Listing", an initial paper or compact disc copy of the "Sequence Listing", as well as an amendment specifically directing its entry into the application. Applicant must also provide a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d). If applicant desires the sequence listing in the instant application to be identical with that of another application on file in the U.S. Patent and Trademark Office, such request in accordance with 37 CFR 1.821(e) may be submitted in lieu of a new CRF.
- A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 CFR 1.821(e). If the effective filing date is on or after September 8, 2000, see the final rulemaking notice published in the Federal Register at 65 FR 54604 (September 8, 2000) and 1238 OG 145 (September 19, 2000). Applicant must provide an initial computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d). If applicant desires the sequence listing in the instant application to be identical with that of another application on file in the U.S. Patent and Trademark Office, such request in accordance with 37 CFR 1.821(e) may be submitted in lieu of a new CRF.

- Total additional claim fee(s) for this application is \$ 360

- \$360 for multiple dependent claim surcharge.

COPY

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- For Rules Interpretation, call (571) 272-0951
- For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.
- Send e-mail correspondence for Patentin Software Program Help @ ebc@uspto.gov

ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
<https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

ANITA D JOHNSON

Telephone: (703) 308-9140 EXT 226

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/573,804	PCT/IB04/03146	P08898US00BAS

FORM PCT/DO/EO/905 (371 Formalities Notice)

COPY